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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,905	08/31/2001	Samuel T. Barone JR.	47015/SAH/M770	3893
23363	7590	07/27/2005	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			POLLACK, MELVIN H	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/944,905

Applicant(s)

BARONE ET AL.

Examiner

Melvin H. Pollack

Art Unit

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/28/02</u> . | 6) <input checked="" type="checkbox"/> Other: <u>see attached office action</u> . |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection.
2. In the response to the last office action, the applicant changed the scope of the claims by adding load balancing to all independent claims, and by further adding new dependent claims without canceling any claims. As a result, a final amendment is necessitated even if the examiner provides a new art rejection. The examiner acknowledges that no new matter has been added by this amendment.
3. Applicant claims that Douceur does not expressly disclose that "one of the plurality of servers receiving one of the requests is selected based on a selection mechanism, the selection mechanism being configured to substantially evenly distribute request processing burdens amongst the plurality of servers," i.e. that load balancing and/or quality/cost of service methods are not performed. The examiner will add new art to show the teachings of load balancing in a television environment. Hence, the original 102 rejection will be replaced.
4. New rejections and art are also required for added claims 36-38.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2145

6. Claims 1, 5-8, 10, 15, 17-21, 26, 29, 32, 34, 35, 37, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Douceur et al. (6,401,126) in view of Goldszmidt et al. (6,195,680).

7. For claims 1, 15, 32, Douceur teaches a system (abstract) for interacting (col. 1, line 1 – col. 10, line 10) with end user terminals over a first communications network (Fig. 5, #32), the system comprising:

- a. A plurality of servers (Fig. 5, #24) coupled to receive communication (col. 1, lines 25-40) from the end user terminals over the first communications network (Fig. 5, #32);
- b. An interface disposed between the plurality of servers and end user terminals (Fig. 5, #34), the interface being operative to receive requests from the end user terminals and to distribute the requests to the plurality of servers (col. 1, lines 54-60);
- c. A second communication network (Fig. 5, #26) coupled to provide communication between the servers in the plurality of servers (col. 1, lines 60-65);
- d. A first computer program segment (Fig. 5, #62) resident in at least one of the plurality of servers (col. 3, lines 20-25) wherein said program receives a request from an end user terminal, processes the request, and broadcasts data regarding the processed request to the other servers (col. 4, lines 20-40; col. 7, line 65 – col. 8, line 30); and
- e. A second computer program segment resident in at least one of the plurality of servers wherein the said program stores data broadcast from at least one other server (col. 3, lines 10-25).

Art Unit: 2145

8. Further regarding claim 1, Douceur teaches an improvement on the distributed systems using thrifty scheduling policies (col. 1, lines 25-27) and that simply adds, rather than changes, the system drawn in the prior art (col. 10, line 65 – col. 11, line 3). Therefore, the embodiment described within the prior art is implicitly included in the embodiment described in the detailed description.

9. Douceur does not expressly disclose that a server is selected based on a selection mechanism, the selection mechanism being configured to substantially evenly distribute request processing burdens amongst the plurality of servers. Goldszmidt teaches a method (abstract) of load balancing multimedia servers (col. 1, line 1 – col. 3, line 55) via a selection mechanism (Fig. 1, #1.1; col. 5, lines 20-50). At the time the invention was made, one of ordinary skill in the art would have added the load balancing techniques of Goldszmidt in order to more properly balance workload and avoid waste of bandwidth (col. 2, lines 50-52).

10. For claims 5, 21, 35, Douceur teaches that the end user terminals comprise ITV receivers, and wherein the requests from the end user terminals are requests from the ITV receivers to retrieve and transmit interactive content to the ITV receivers (col. 2, lines 3-10).

11. For claims 6, 29, Douceur teaches a database for permanent storage of the data relating to processed requests (Fig. 5, #28).

12. For claim 7, Douceur teaches that the database is coupled to the second communications network (Fig. 5, #28).

13. For claims 8, 26, Douceur teaches that the interface disposed between the plurality of servers and end user terminals further includes means for routing incoming requests to the respective servers (col. 11, lines 40-50).

Art Unit: 2145

14. For claims 10, 17, Douceur teaches that the routing means comprises a load balancing system (col. 11, lines 40-50).

15. For claim 18, Douceur teaches that the load balancing system distributes requests to the plurality of servers (col. 11, lines 5-10).

16. For claims 19, 37, Douceur teaches allocating the request uses a round robin allocation to distribute the load over the plurality of servers (col. 6, lines 50-60).

17. For claim 20, Douceur teaches forwarding the request further comprises performing a load analysis to distribute the incoming requests over the plurality of servers (col. 7, lines 30-45).

18. For claim 34, Douceur teaches that forwarding the request is done in a random manner to distribute the load over the plurality of servers (col. 6, lines 55-60).

19. For claim 38, Douceur does not expressly disclose that each server maintains all data needed for handling a request. Goldszmidt teaches this limitation (col. 7, line 55 – col. 8, line 65). At the time the invention was made, one of ordinary skill in the art would have added this feature to Douceur to allow for the handling of a failed server via switchover transparent to the user (col. 8, lines 25-35).

20. Claims 2, 3, 16, 27, 28, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Douceur and Goldszmidt as applied to claims 1, 15, 26, 32 above, and further in view of Hugenberg et al. (6,714,545).

21. For claims 2, 27, Douceur and Goldszmidt do not expressly disclose that the first program segment broadcasts data over the second communication network to the second program segment. Hugenberg teaches a method (abstract) of providing data services to an array

Art Unit: 2145

of end users from an array of servers (col. 1, line 1 – col. 3, line 15) that uses the second communication segment in the method described above (Fig. 1, #18). At the time the invention was made, one of ordinary skill in the art would have used the second network as mentioned above in order to allow for more efficient data striping of Douceur, and also to enable Pay-Per-View services (col. 2, lines 60-62).

22. For claim 3, Douceur and Goldszmidt do not expressly disclose that the second communications network comprises an Ethernet network. Hugenberg teaches this limitation (col. 4, lines 5-6). At the time the invention was made, one of ordinary skill in the art would have used an Ethernet network to Douceur and Goldszmidt to accommodate known systems (col. 1, line 48).

23. For claims 16, 33, Douceur and Goldszmidt do not expressly disclose that transmitting data is performed over a private network. Hugenberg teaches this limitation (col. 7, lines 23-33). At the time the invention was made, one of ordinary skill in the art would have added private networks to Douceur and Goldszmidt in order to provide VDSL features (col. 2, lines 40-65).

24. Claim 28 is drawn to the limitations in claim 5, as rejected by Douceur. At the time the invention was made, one of ordinary skill in the art would have combined the teachings for the reasons provided in the claim 2 discussion above. Therefore, since claims 5 is rejected, claim 28 is also rejected for the reasons above.

25. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Douceur, Goldszmidt and Hugenberg as applied to claim 3 above, and further in view of Hoguta et al. (6,725,303).

Art Unit: 2145

26. For claim 4, Douceur, Goldszmidt and Hugenberg do not expressly disclose that the second communications network comprises a gigabit Ethernet network. Hoguta teaches a method (abstract) of providing data services (col. 1, line 1 – col. 4, line 45) using a gigabit Ethernet network (col. 1, lines 20-22).

27. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Douceur and Goldszmidt as applied to claims 1, 8 above, and further in view of Koperda et al. (5,790,806).

28. For claim 9, Douceur teaches that the routing means comprises the Domain Name Server function of the Internet. Koperda teaches a method (abstract) of providing a cable data network for providing information (col. 1, line 1 – col. 3, line 8) in which a DNS function is used for routing (col. 5, line 50 – col. 6, line 60). At the time the invention was made, one of ordinary skill in the art would have provided DNS techniques to Douceur in order to build Douceur on legacy IP addressing systems (col. 6, lines 10-11).

29. Claims 11, 12, 14, 22-25, 30, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Douceur, Goldszmidt and Hugenberg as applied to claims 1, 2, 15, 26 above, and further in view of Hoarty (5,883,661).

30. For claims 11, 22, 30, Douceur, Goldszmidt and Hugenberg do not expressly disclose a process coupled to the second communications network, wherein the process is programmed to monitor the network for instances of specific transactions. Hoarty teaches a method (abstract) of performing interactive television with a plurality of servers and a plurality of clients (col. 1, line 1 – col. 3, line 50) in which the network is monitored for specific transactions (col. 6, lines 5-7).

Art Unit: 2145

At the time the invention was made, one of ordinary skill in the art would have added transaction monitoring to Douceur, Goldszmidt and Hugenberg in order to bolster interactive capabilities (col. 1, lines 30-35).

31. For claims 12, 23, 31, Douceur, Goldszmidt and Hugenberg do not expressly disclose that one of the processes comprises a threshold monitoring process coupled to a content encoder, wherein the threshold monitoring process is programmed to process data transmitted over the second communications network, determine that a threshold has been exceeded, and to transmit a corresponding notification to the content encoder. Hoarty teaches a content encoder (col. 4, lines 35-45) in which a threshold monitoring process coupled to a content encoder (Figs. 1 and 4), wherein the threshold monitoring process is programmed to process data transmitted over the second communications network (col. 4, line 50 – col. 5, line 50), determine that a threshold has been exceeded (col. 6, lines 5-15), and to transmit a corresponding notification to the content encoder (Figs. 5 and 6). At the time the invention was made, one of ordinary skill in the art would have added transaction monitoring to Douceur and Hugenberg in order to bolster interactive capabilities (col. 1, lines 30-35).

32. For claim 14, Douceur, Goldszmidt and Hugenberg do not expressly disclose that the process comprises a transaction processing process. Hoarty teaches this limitation (col. 10, lines 33-40). At the time the invention was made, one of ordinary skill in the art would have added transaction monitoring to Douceur and Hugenberg in order to bolster interactive capabilities (col. 1, lines 30-35).

33. For claim 24, Douceur, Goldszmidt and Hugenberg do not expressly disclose that detecting a data threshold comprises detecting a certain number of users. Hoarty teaches this

Art Unit: 2145

limitation (col. 5, lines 30-50). At the time the invention was made, one of ordinary skill in the art would have added this feature to Douceur in order to better partition services (col. 5, line 45).

34. For claim 25, Douceur, Goldszmidt and Hugenberg do not expressly disclose that encoding the indication of detecting the threshold comprises placing an indication of detecting the threshold within a video signal to be provided to an ITV receiver. Hoarty teaches this limitation

35. Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Douceur, Goldszmidt, Hugenberg, and Hoarty as applied to claim 12 above, and further in view of Plaza Fernandez et al. (6,377,992).

36. For claim 13, Douceur, Hugenberg, and Hoarty do not expressly disclose a frame relay line connected to the threshold monitoring process and the content encoder to transmit information there between. Plaza Fernandez teaches a method (abstract) of improving physical communications (col. 1, line 1 – col. 6, line 5) in which frame relay lines are used in such a manner (col. 7, line 36). At the time the invention was made, one of ordinary skill in the art would have added frame relay lines to Douceur in order to combine communications links for efficiency purposes (col. 3, lines 5-10).

37. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Douceur and Goldszmidt as applied to claim 1 above, and further in view of Yu (6,351,775).

38. Douceur and Goldszmidt do not expressly disclose that the selection mechanism randomly selects the one of the plurality of servers. Yu teaches a method (abstract) of providing

Art Unit: 2145

load-balancing techniques to content servers (col. 1, line 1 – col. 5, line 20) in which random assignments may be used (col. 10, lines 54-58). At the time the invention was made, one of ordinary skill in the art would have added Yu to Douceur and Goldszmidt in order to normalize load balancing (col. 10, lines 45-50).

Conclusion

39. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They cover load balancing techniques request distribution techniques within the content server environment, particularly video or multimedia transmission.

40. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin H. Pollack whose telephone number is (571) 272-3887.

The examiner can normally be reached on 8:00-4:30 M-F.


Art Unit: 2145

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on (571) 272-6159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MHP

22 July 2005


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